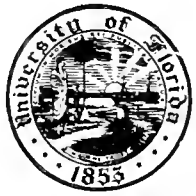
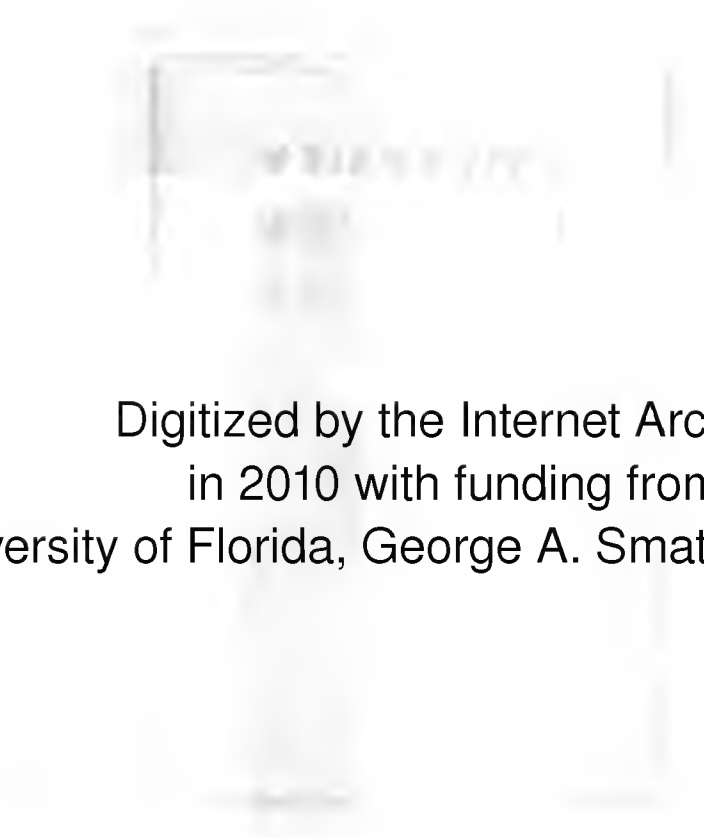




THE PANAMA CANAL
REVIEW

ON THE INSIDE

- New Board Members
- Pilots Get Radios
- Sandfly Control

Vol. 14, No. 11
JUNE 1964

Robert J. Fleming, Jr., Governor-President
David S. Parker, Lieutenant Governor
Frank A. Baldwin
Panama Canal Information Officer

PANAMA CANAL REVIEW

Official Panama Canal Publication
Published monthly at Balboa Heights, C.Z.
Printed at the Printing Plant, La Boca, C.Z.
Distributed free of charge to all Panama Canal Employees.

Robert D. Kerr, Press Officer
Publications Editors
Richard D. Peacock and Julio E. Briceño
Editorial Assistants
Eunice Richard, Tobi Bittel, and
Tomas A. Cupas

The British luxury liner Canberra made her second trip through the Panama Canal on May 28. She is shown here entering Pedro Miguel Locks on her initial trip through the Canal. Norton Lilly is the agent at the Canal.

About The Cover

JOSEPH PENNELL, an enthusiastic and sensitive American artist, never surpassed the sketches he did on the Panama Canal. They are brilliant, bold, and convey the vigorous spirit of the building of the Canal. "The Native Village," this month's cover, was one of his portrayals of life as he found it on the Isthmus in 1912. Pennell felt that he was sketching "the most wonderful thing in the world," and he captured it, he said, at its most picturesque moment. History has proved that his judgment was accurate. One of the limited number of original lithographs of this sketch hangs in the Canal Zone Library-Museum.

Index

NEW BOARD MEMBERS

Thomas C. Mann
Assistant Secretary of State for Inter-American Affairs

THE BOARD of Directors of the Panama Canal Company has two new members. They are Thomas C. Mann, Assistant Secretary of State for Inter-American Affairs, and Paul R. Ignatius, Under Secretary of the Army. Mr. Mann, of Laredo, Tex., was sworn into his new post as Assistant Secretary of State for Inter-American Affairs on January 3. He also is Special Assistant to the President and U.S. Coordinator of the Alliance for Progress. Mr. Ignatius assumed the post of Under Secretary of the Army on February 24.

Mr. Mann succeeds Edwin M. Martin, who was designated by Pres. Lyndon B. Johnson as U.S. Ambassador to Argentina. Mr. Ignatius succeeds Stephen Ailes, who was appointed by the President as Secretary of the Army.

Mr. Mann, a career Foreign Service officer, served from 1961 as Ambassador to Mexico. This will be the second time Mr. Mann serves as Assistant Secretary of State for Inter-American Affairs, a post he previously held from September 1, 1960, to March 30, 1961, when he was appointed as Ambassador to Mexico.

From September 1957 to September 1960 Mr. Mann was Assistant Secretary of State for Economic Affairs, and was active in numerous aspects of United States relations with Latin America.

He was born in Laredo on November 11, 1912, and was graduated from Baylor University in Waco, Tex., in 1934, receiving both bachelor of arts and bachelor of laws degrees. He practiced law in Laredo from 1934 to 1942.

In 1942, when he joined the Foreign Service, Mr. Mann was first assigned as Special Assistant to the United States Ambassador in Montevideo, Uruguay.

He returned to the Department in 1943 as assistant chief of an economic division. Later, he was assigned as Chief of the Division of River Plate Affairs in the Department and as Special Assistant to the Assistant Secretary of State for American Republics Affairs. In 1947, Mr. Mann was assigned to the United States Embassy in Caracas, Venezuela, in charge of political and petroleum affairs.

In January of 1950, he returned to the Department of State as Director of the Office of Middle-American Affairs, and in November of that year he was named Deputy Assistant Secretary in the Bureau of Inter-American Affairs. In August of 1953 Mr. Mann again was assigned abroad, going to Athens as Counselor of Embassy. In October of 1954, he was named Counselor of Embassy in Guatemala City. He was appointed Ambassador to El Salvador in October 1955 and he continued in that capacity until November 1957.

Mr. Mann is married to the former Nancy Milling Aynesworth of Waco, Tex. and they have a son, Clifton Aynesworth Mann.

Mr. Ignatius is a native of Los Angeles, Calif. He attended public schools in Glendale, a suburb of Los Angeles. In 1942, he received an A.B. degree with honors from the University of Southern California and was elected to Phi Beta Kappa.

During World War II, Mr. Ignatius served as a lieutenant in the Navy, principally as an aviation ordnance officer aboard the carrier *Manila Bay* in the Pacific. For a brief period of time he was

Paul R. Ignatius
Under Secretary of the Army

a member of a staff responsible for preparing a comprehensive manual for the Navy's Bureau of Supplies and Accounts.

In February 1947 Mr. Ignatius was awarded the degree of master in business administration from Harvard University. In the following 3 years he served as a research assistant and as an instructor in business administration at Harvard.

He resigned from the Harvard staff in 1950 to form, with two of his Harvard Business School associates, the management, consulting, and research firm, Harbridge House, Inc.

During the next 11 years, Mr. Ignatius played a major role in the development and expansion of Harbridge House. A great part of this effort was devoted to consulting and research in military supply and procurement and in the procurement responsibilities of a large segment of defense industry. Among the major projects he undertook was the planning and establishment of the Army Management School at Fort Belvoir and the Army Logistics Management Center at Fort Lee.

On May 22, 1961, Mr. Ignatius was appointed Assistant Secretary of the Army (Installations and Logistics) and held that position until he assumed the office of Under Secretary of the Army on February 28 of this year.

In 1947, Mr. Ignatius married Nancy Sharpless Weiser of Holyoke, Mass. They have four children: David, 13; Sarah, 12; Amy, 9; and Alan, 5.

CANAL COMMERCIAL TRAFFIC BY NATIONALITY

Nationality	Third Quarter, Fiscal Year 1964					
	1964		1963		1951-55	
	Number of transits	Tons of cargo	Number of transits	Tons of cargo	Average number transits	Average tons of cargo
Belgian	16	89,751	11	37,806	2	2,716
British	357	2,283,881	332	1,846,957	323	1,936,872
Chilean	33	242,596	22	146,225	17	85,011
China, Nat.	14	97,268	17	107,747	6	54,599
Colombian	81	82,809	48	66,540	35	37,708
Danish	75	435,038	73	380,561	57	224,852
French	58	233,200	26	131,587	35	163,469
German	278	851,705	245	746,900	54	109,721
Greek	148	1,367,307	172	1,452,448	29	253,278
Honduran	90	65,178	51	23,686	97	130,876
Israeli	10	69,494	18	42,947	------	------
Italian	45	242,216	36	198,678	32	182,089
Japanese	191	1,066,882	188	1,079,996	69	470,531
Lebanese	15	129,617	10	83,234	------	------
Liberian	241	2,654,571	200	1,715,665	48	300,445
Netherlands	210	813,330	187	770,229	30	151,379
Nicaraguan	17	25,357	13	20,059	6	6,551
Norwegian	400	3,225,705	356	2,690,695	203	833,741
Panamanian	148	527,688	100	414,403	116	665,039
Peruvian	34	129,011	15	58,151	4	9,135
Philippine	20	75,950	14	52,072	5	33,662
Swedish	119	796,018	98	545,096	46	198,424
Swiss	24	26,601	1	7,979	2	11,789
United States	413	2,484,938	338	1,820,862	498	3,088,092
All others	52	271,114	30	163,555	59	113,413
Total	3,089	18,287,225	2,601	14,604,148	1,773	9,063,392

MONTHLY COMMERCIAL TRAFFIC AND TOLLS

Vessels of 300 tons net or over

(Fiscal Years)

Month	Transits			Gross Tolls * (In thousands of dollars)		
	1964	1963	Avg. No. Transits 1951-55	1964	1963	Average Tolls 1951-55
July	944	978	557	$4,898	$4,980	$2,432
August	946	950	554	4,842	4,926	2,403
September	923	909	570	4,836	4,617	2,431
October	980	882	607	5,154	4,411	2,559
November	946	924	568	4,879	4,684	2,361
December	958	947	599	4,897	4,983	2,545
January	1,015	769	580	5,140	3,871	2,444
February	997	841	559	5,193	4,313	2,349
March	1,077	991	632	5,480	5,084	2,657
April						
May						
June						
Totals for 6 months	8,786	8,191	5,226	$45,319	$41,869	$22,181
Fiscal year	------	11,017	7,062	------	$56,368	$29,969

* Before deduction of any operating expenses.

TRAFFIC MOVEMENT OVER MAIN TRADE ROUTES

The following table shows the number of transits of large, commercial vessels (300 net tons or over) segregated into eight main trade routes:

	Third Quarter, Fiscal Year 1964		
	1964	1963	Avg. No. Transits 1951-55
United States intercoastal	108	70	146
East coast of United States and South America	628	535	445
East coast of United States and Central America	196	111	129
East coast of United States and Far East	566	462	261
United States/Canada east coast and Australasia	79	63	48
Europe and west coast of United States/Canada	269	268	193
Europe and South America	357	305	123
Europe and Australasia	106	108	95
All other routes	780	679	333
Total traffic	3,089	2,601	1,773

WITH THE PANAMA Canal traffic reaching a total of 10,110 oceangoing ships at the end of April, there was every indication that fiscal year 1964 would be a record breaker.

At the end of April, only 1,314 ships were needed to meet the previous yearly record of 11,424 transits set in 1962 by ships of more than 300 Panama Canal net tons. May traffic indicated that this total could easily be met and passed in June.

Traffic, cargo, and tolls all continued at a high level in January, February, and March, all months during which the waterway was handling an all-time record in traffic. The daily average of transits reached a new high of 35 oceangoing ships during the months of January, through March of 1964.

This unusually heavy third quarter was the result of large grain movements to Europe and the speculative rush to close deals in Japan for fear of renewed restrictions on Japanese imports. These conditions combined with the speculative demands for Russian wheat, resulted in a sharp increase in charter rates. With higher charter rates, many ships have been taken out of the idle merchant fleets of the world and placed back into active service.

During March, the Japanese Government reinstituted economic controls designed to curtail imports and bring their foreign exchange holdings back into balance. In the past these corrective measures have resulted in a reduction in Canal cargo movements. The Far East currently accounts for approximately 37 percent of the Canal cargo flow.

Major commodities shipped through the Canal to the Far East and especially Japan, include coal cargoes shipped through Hampton Roads, scrap iron from Europe and the U.S. east coast and phosphates

from U.S. gulf ports. Far East cargo moving to the Atlantic consists of finished goods manufactured in Japan and iron ore from Peru carried on the ships which load coal for the return trip to Japan.

Wheat shipments from United States and Canadian west coast ports to Europe amounted to nearly 2 million tons this past fiscal year. These may drop by as much as 700,000 tons if predictions of a good wheat crop in Europe prove correct. Grain shipments usually slack off during summer months because of routing of grain through the St. Lawrence Seaway.

The commodities expected to hold their own in future Canal trade movements are petroleum and bananas. Both may increase in the coming year. There may be continued increase in shipments of gasoline from gulf ports to the U.S. west coast; residual oil to the Far East and crude oil to the U.S. west coast.

Bananas, for many years among the top commodities in Canal trade, are being shipped in a steadily increasing volume from Central and South American ports to the United States and Europe. Swift refrigerated banana boats take the fruit to its destination in record time and return through the Canal in ballast to pick up new cargoes. Bananas need not be transported these days on especially designed vessels. Because of new methods of packing, they can be carried on any ship with refrigerated cargo space.

Predictions made as to the immediate future of Canal traffic must take into consideration the ships in the world charter market as a result of the Russian wheat demands. Many of these vessels remain in service and are being used to carry any cargo available. Future cargo totals may drop as a result while transit figures remain at the present high level.

PRINCIPAL COMMODITIES SHIPPED THROUGH THE CANAL

Pacific to Atlantic

(All cargo figures in long tons)

Commodity	Third Quarter, Fiscal Year 1964		
	1964	1963	Average 1951-55
Ores, various	1,493,594	1,563,792	961,032
Lumber	1,119,227	988,427	868,628
Petroleum & products (excludes asphalt)	521,022	350,657	249,439
Wheat	494,618	352,651	508,144
Sugar	366,267	416,310	233 804
Canned food products	220,736	235,009	304,637
Nitrate of soda	226,483	181,503	360,514
Barley	151,917	169,378	58,964
Bananas	354,126	274,884	192,445
Metal, various	298,492	268,530	162,399
Food products in refrigeration (except fresh fruits)	260,659	282,339	163,265
Coffee	110,486	98,206	76,638
Fishmeal	333,667	323,443	
Iron and steel manufactures	306,667	219 518	60,502
Pulpwood	126,818	119,956	48,257
All others	1,565,591	1,577,477	660,674
Total	7,950,370	7,422,080	4,909 342

Atlantic to Pacific

Commodity	Third Quarter, Fiscal Year 1964		
	1964	1963	Average 1951-55
Petroleum & products (excludes asphalt)	2,860,421	2,222,273	968,731
Coal and coke	1,704,659	1,242,702	676,946
Iron and steel manufatures	401,581	245,565	420,153
Phosphates	602,821	500,545	195,587
Sugar	104,543	68,669	101,508
Soybeans	504,110	404,302	134,079
Metal, scrap	644,261	344,815	16,632
Sorghum	114,552		
Corn	769,756	245,419	19,077
Paper and paper products	115,965	62,682	88,306
Ores, various	392,704	228,610	27,416
Fertilizers, Unclassified	113,436	80,824	34,616
Cotton, raw	116,614	80,572	66,290
Chemicals unclassified	199,618	119,797	41,822
Metals, various	137,385	90,987	31,882
All others	1,554,429	1,244,306	1,219,126
Total	10,336,855	7,182,068	4,042,171

CANAL TRANSITS — COMMERCIAL AND U.S. GOVERNMENT

	Third Quarter, Fiscal Year 1964				
	1964			1963	Avg. No. Transits 1951-55
	Atlantic to Pacific	Pacific to Atlantic	Total	Total	Total
Commercial vessels:					
Ocean-going	1,625	1,464	3,089	2,601	1,773
Small*	83	73	156	101	284
Total commercial	1,708	1,537	3,245	2,702	2,057
U.S. Government vessels: **					
Ocean-going	41	35	76	64	151
Small*	17	10	27	36	71
Total commercial and U.S. Government	1,766	1,582	3,348	2,802	2,279

*Vessels under 300 net tons or 500 displacement tons.
**Vessels on which tolls are credited. Prior to July 1, 1951, Government-operated ships transited free.

RADIO SYSTEM WILL IMPROVE CANAL TRANSIT OPERATIONS

HAND SIGNALS are going out and radio signals are in and, because of that fact, Canal transits are more efficient than ever.

The hand signal, for so many years the method used by pilots to tell locomotive operators when to stop, start, pull, or brake, will no longer be the major link between them. It will be used only in case radio communications fail.

And scheduled to be in the first stage of operation this month is the new radio system between pilots, lockmasters, and operators of the locomotive "mules," the Engineering and Construction Bureau reports.

The new receiving and sending equipment was purchased at a nominal cost of about $90,000. The receivers ultimately will be installed in 57 of the new and more powerful locomotives that are being delivered at the rate of about 3 a month from Japan. Two additional receivers will be used for spares.

For the pilots and lockmasters, 40 transceivers were slated for June delivery. These send and receive on four frequencies.

There are about 23 of the new locomotives here, with final delivery date for the 59 set at August of next year. Two of these will be dismantled to provide spare parts. But deliveries are running ahead of schedule by about 2 months. This means that the transmitting and receiving system may be in use at all three locks in less than a year. No equipment is being installed in the old locomotives, as they are unsuited to it and it isn't necessary for their operation.

The purpose of the system is to relay operational instructions from pilot to locomotive operator. Radios will be used by the pilots to advise the lockmaster of cable arrangement desired and locomotive speed. This will vastly improve pilot control of the transiting procedure.

The old locomotives use only one cable and they move slower than the new ones. This means the operator had only one cable to watch and had more time to respond. The two cables require much more of his attention and, with the increased speed, it was found that hand signals were inadequate. The use of a receiver will mean that he can concentrate entirely on the power functions of the mule and not have to be watching for hand signals. He'll be able to watch his two cables more closely and coordinate more quickly with the pilot.

From the pilot's point of view, here's how it looks when he's steering a ship through the locks. He uses the radio to give directions.

There are other advantages to the system. The pilot can call ahead to a lockmaster and inform him of the speed he requires and other transit information. Formerly, the lockmaster carried a telephone handset and checked with the control house operator for the information. The control house operator gets his information by teletype and through keeping in touch with the dispatch operator. This was a cumbersome lockmaster-pilot communication system, compared to a direct radio link between these men.

The pilots can also keep in touch with one another on the same ship, and pilots

on separate ships can talk to each other with this system, if that is necessary. The Navigation Division and Locks Division worked up the operating procedures that take the best technical advantage of the system.

It will be in full operation first at Gatun Locks, then at Pedro Miguel and Miraflores Locks as the remainder of the new mules are delivered.

The radios will also eliminate another old procedure. When a ship had several pilots, wires had to be strung about the ship to provide an intercom network between the pilots.

Testing on the system was carried out from March to November of 1963. It was found that it offered excellent advancement in communications. And, with the new locomotives creating the need for quicker communication, a way was needed to meet this problem. The radios provided the answer.

The tests led to the conclusion that the system was necessary to guarantee safety in transits and to meet the faster transit capabilities offered by the new locomotives. The old mules had a maximum speed of 2 miles an hour when towing a ship; towing speed of the new ones is 3 miles an hour. On the return trip to get another ship, the new ones move at 9 miles an hour, the old ones at 5 miles an hour. The return trip with a new locomotive results in an average saving of about 10 minutes a trip, which is significant when multiplied by a huge number of transits. The radio system will keep pace with this improvement in transit speed.

In the locks, Pilot A. L. Wilder gives directions via radio, inching the big ship along.

The Laconia, guided by the radio communication between the locomotive operators and the pilot on board, enters the locks.

THEY'LL PUT THE BITE ON SANDFLIES

Experiments Yield Key To Control

Entomologist Hawkins reaches for a glass jar attached to the sunken, open-end drum. The jar contains sandflies which have developed in the salty mud inside the drum.

ALL GOOD THINGS come in small packages.

Except for sandflies.

The tiny sandfly, the scourge of the Atlantic side, is one of the few pest insects still thriving in large quantities in the Canal Zone.

Experts from the Division of Sanitation, headed by James P. MacLaren, consider the sandfly a potential health danger despite the general notion that he is only a harmless nuisance. Recently they completed a series of water management tests in a 25-acre mangrove swamp plot at the Navy Ammunition Depot area near Coco Solo. And they think they might have the answer to the problem of controlling this pest.

Control, they believe can be obtained by submerging the area with tidewater. Inundation of the salt mud, the sandfly's favorite breeding ground, spelled doom for 99 percent of the insects and their larvae.

This method, involving the use of tidegates to keep the sea water at a fixed level in the mangrove swamp, resulted within 2 months in the reduction of the sandfly population in the test site to a minimum. For the final 7 months of the test, larvae in soil samples and adult counts remained at a near zero level. Check areas around the research plot continued to provide high counts of sandfly larvae and adults throughout the study.

A reverse of this method, employed during 2 months of the dry season, involved the use of the same water control structures to prevent tide water from entering the study area. Sandflies stopped breeding when the soil surfaces dried out but continued to thrive along the drainage ditches where water remained.

Water management tests for control of sandflies were started in 1961 under the supervision of James L. Hawkins, Chief of the Entomology Laboratory of the Division of Sanitation, with the cooperation of the U.S. Army Environmental Health Unit.

The Division of Sanitation installed the spillways, tidegates, and dikes at the test plot. Assistance was received for the construction of tidegates from a design provided by Dr. Andrew J. Rogers, Director of the Control Research Center at Vero Beach, Fla.

When opened, tidegates allowed the tidewater to enter the areas. The gates were closed at the highest tidewater level so that the 25-acre plot was completely inundated to a depth of from 6 inches to 2 feet. The fixed level water cover was retained on the entire area from May 1963 to February 1964, a period during which continued observations were made of sandfly breeding.

The water was maintained at a level high enough to cover the land area but, at the same time, low enough to prevent drowning or killing of the existing vegetation, particularly the dominant mangrove trees.

Sanitation men had found that if the vegetation dies or is removed, they are faced with the problem of mosquitoes that like to breed in open brackish water areas with an abundance of sunshine. Those mosquitos that did breed in the test area were easily controlled by oil or by flushing.

Attempts to ward off the sandfly date back to 1944 when Canal Zone residents were advised that two types of new repellent were on sale in the Retail Stores.

Nothing was done to control the pest until 1958 when J. P. Smith, former Chief of the Division of Sanitation, and

New breather shoots that obtain air for the mangrove trees and enable them to live in the tidal swamps are seen in this drainage ditch. If the breather tubes are covered with water, the mangrove trees will die.

Spot of Beauty In the Zone

A VISIT to Morgan's Garden is like viewing a favorite painting—though you've seen it before, it's pleasure stirs you anew.

Situated on Gaillard Highway, the hilltop is alive with the colors of tropical flowers. A stroll along the paths and palm-lined walks offers a different aspect to the ordinary tropical scenery and at one point, offers a charming view of the Panama Canal. For a pleasurable hour or so on an afternoon, a drive to Morgan's Garden and a tour of its grounds is well worth the time.

A single bloom of one of the beautiful heliconia flowers, which is related to the banana family. These grow in profusion at Morgan's Garden.

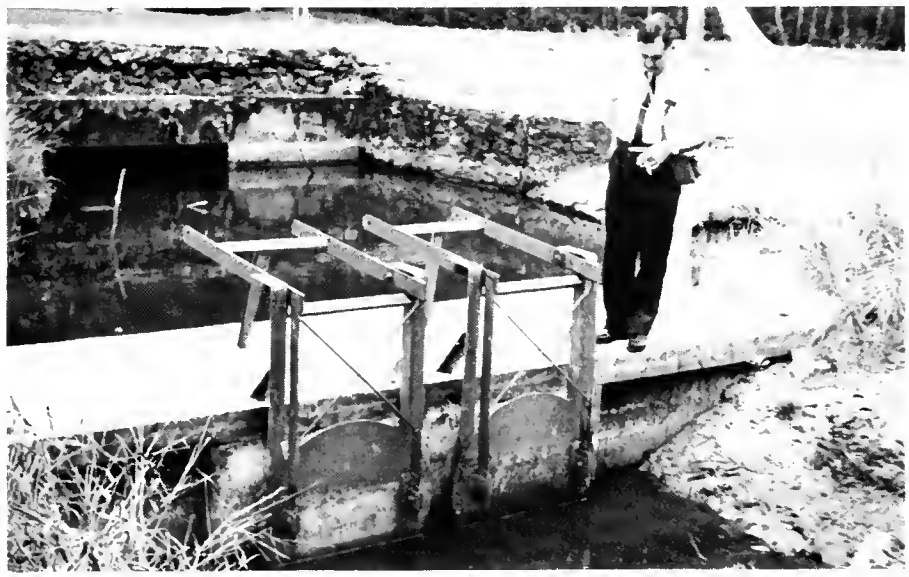
The varigated foliage hibiscus, one of the common, yet lovely, flowers on the Isthmus. In the background are the multi-colored crotons, also plentiful at Morgan's Garden.

Samuel G. Breeland, Canal Zone medical entomologist, experimented with aerial application of pelletized dieldrin, a soil poison he hoped would destroy the larvae before they became adults.

The first application of dieldrin brought a marked reduction of breeding in the treated areas for about 8 months, but succeeding applications were failures as the sandflies developed resistance against or tolerance for the chemical.

Canal history reveals that the sandfly has been an Isthmian resident for a long time. The breeding areas totaling 3,000 acres of mangrove swamps on the Pacific and Atlantic side of the Canal Zone alone. Apparently the sandfly prefers to lay eggs on land that has a salt content. Most of this land is flooded daily by tidewater.

There are approximately 50 sandfly species on the Isthmus with *Culicoides furens* the main specie. Although he is a tiny fly, there are other species one-half the size with as big a bite. Apparently all sandflies like to bite humans. It took many years to devise a practical way, but now it appears the humans will be able to bite back, through science, and eliminate the pest.



John Palmer Smith, former Chief of the Division of Sanitation, who initiated sandfly control research here, inspects a tide gate installation at Coco Solo.

Houston's Port Paved the Way To Greatness

DOWN THROUGH history the great cities of the world invariably have been great port cities as well, and Houston has become a great city because, and only since, it built itself a port.

Indirectly or directly, it is the port and the ship channel which changed Houston from a moderately prospering center of timber and cotton to one of the great trading centers of the Nation and the heart of the vital, strategic, and evergrowing petro-chemical industry.

It is the port which made Houston first in the South in both population and income, sixth in population in the Nation and recognition by the Government as the Nation's fastest growing city.

It is the port which gave it the huge $2.6 billion industrial complex and brought not only refineries and petrochemicals but steel mills, paper plants, cement factories, and a host of other heavy industry that would otherwise never have come here.

It is the port which feeds the 6 trunkline railroads, 38 motor-freight carriers, 27 steamship agencies, 35 freight forwarders, 8 barge lines, 11 export packers, 19 stevedoring companies, and the many other services needed to move freight cargo in foreign and domestic trade.

It is the port and its industrial and transportation complex that was one of the deciding factors in the selection of Houston as the site of the N.A.S.A. Manned Space Flight Center, bringing in another $200 million facility and another $60 million yearly salary.

While the above generalities can scarcely be gainsaid, a few cold facts and figures serve to bolster them considerably. The Port of Houston, the Houston Chamber of Commerce, the Maritime Association, *Sales Management Magazine*, and others have made studies of the city, the port, ship channel industry, and the metropolitan area which provide those cold facts and figures and demonstrate graphically the tremendous economic importance of deep water to Houston.

First, the vast industrial complex along the ship channel which came to Houston solely because of its deep water now employs an estimated 100,000 persons—nearly one-twelfth of the population of Harris County. Using the ratio of one in four as a basis for employment, (i.e., employee as head of household with wife and two children,) those

(See p. 15)

Port of Houston's 12-story Trade Building, owned by the port.

Turning basin at Port of Houston, looking downstream.

CANAL HISTORY

50 Years Ago

A CAREFUL survey of the newly built Canal structures, following a severe earthquake 50 years ago, revealed no damage to the locks, dams or spillways, shop buildings, or permanent quarters. There were some cracks in the concrete blocks and stucco of the new Administration Building at Balboa. According to a report in *The Canal Record*, the quake was about V or VI in the Rossi-Forel scale and was strong enough to "throw the pens off the sheets of all instruments."

Commercial use of the Panama Canal was begun on May 18, 1914 when three barges loaded with sugar diverted from Tehuantepec route by the American Hawaiian Steamship Co., left Balboa in tow for Cristobal. By June 1, the total earning in Canal tolls on cargo and ballast tonnage came to $7,356.

The SS *Allianca* of the Panama Railroad Steamship Line was passed through the Gatun Locks from the Atlantic channel to Gatun Lake and return June 8, 1914, making it the first ocean-going passenger vessel to enter or pass the Canal locks. The SS *Ancon* was locked through Gatun in a similar operation June 11.

A number of shipping companies were arranging new schedules in anticipation of the opening of the Panama Canal to commercial traffic. They included the British Pacific Steam Navigation Co., then serving South America from Europe, the Luckenbach Steamship Co. with service between San Francisco and Balboa and the W. R. Grace Co. then operating four ships from New York to San Francisco around South America.

25 Years Ago

AS THREATS of a second world war became more serious in Europe, 25 years ago, Harry Woodring, U.S. Secretary of the Army, urged the immediate construction of a third set of locks for the Panama Canal to be used exclusively by warships of the U.S. Navy in time of emergency.

In testimony before the House Appropriations Subcommittee, he also urged the immediate strengthening of land and air establishments of the Canal Zone and said that the U.S. Navy should at all times be assured of rapid and safe transit through the Canal.

The so called "Old Timers Bill," extending the thanks of Congress to the civilian employees who participated in the construction of the Canal and providing more liberal retirement annuities to those who served three or more years during the construction period, was passed by the House of Representatives by unanimous consent.

Also from Washington came predictions of an early ratification of the new United States-Panama treaty as all material objections to the pact by the U.S. Senate were removed. The prediction was made by Senator Key Pittman, Chairman of the Senate Foreign Relations Committee.

10 Years Ago

HEARINGS ON the operation of the Panama Canal reorganization program were begun in Washington in June 1954. Gov. John S. Seybold, one of the first witnesses, testified that the new organization was functioning well and that employee morale was reasonably high. He recommended that the pay differential be made free of income tax and that rentals be reduced 50 percent. He said the success of the Canal organization in the performance of its mission, was dependent on the ability to recruit and hold competent employees.

Robert E. Mayer, President of the Pacific American Steamship Association told the Panama Canal Subcommittee in Washington that the Panama Canal could be put on a profitable basis if more businesslike methods of administration were followed. He recommended that the organization work toward lowering tolls. He said that higher tolls would increase freight costs.

The Tecan Corp., which had the $3,391,000 contract for the removal of 2,500,000 yards of earth from Contractors Hill, announced that it would spend $1 million on equipment for the job and would employ 200 men, as many as possible in Panama.

One Year Ago

SIXTEEN U.S. astronauts, including six who had already traveled in space, arrived on the Isthmus last June to learn how to survive in the dense jungles. They spent 4 days training at Albrook Air Force Base and 4 days in the tropical rain forest.

Members of the Panama Canal Board of Directors, accompanied by Panama Canal Secretary W. M. Whitman, arrived by plane for a 2-day stay in the Canal Zone. They reviewed the 1964 and 1965 capital and operating budgets and discussed other Panama Canal matters.

A "whachamacallit?" No, there really is a name for it—the "rail-car" in railroad language. Two of them have been purchased for the Railroad Division and are used for track patrol and inspection. They can carry seven passengers and a driver and could be used to supplement train schedules. The small steel wheels substitute for rubber tires.

SHIPPING

Women Ahoy!

WHEN MEN go to sea, women are left behind.

That was in the good old days.

In this modern world, the womenfolk may follow their men to sea and sometimes they take the family too.

Such a woman is Mrs. Ruth Nygaard; wife of Capt. Einar Nygaard, skipper of the Danish-flag *Chilean Reefer* which goes through the Canal on a regular schedule carrying bananas from Guayaquil, Ecuador, to Antwerp.

In May, she accompanied her husband on the southbound voyage of the vessel and chalked up her 50th transit through the Panama Canal. She was still a little behind her husband in Canal transit records, however. He will be making his 150th and last trip through the Canal when the vessel goes northbound on June 29.

Mrs. Nygaard is one of many officers' wives who are permitted by Scandinavian shipping companies to accompany their husbands on one or two voyages each year. On some of the larger ships which seldom call at their home port, arrangements are made to take not only the wife but the children.

Australia-L.A. Service

THREE FREIGHTERS—two Japanese and one Swedish—will be coming through the Canal soon on a schedule which takes them to such widely separated ports as Adelaide, Australia, and Tampa, Fla. The service operated by the Kawasaki Kisen Kaisha Ltd. and subsidized by the Australian Government, will be opened by the *Malacca Maru*, a "K" line ship due at Cristobal June 11 from Australia by way of South American and Caribbean ports. After unloading here, the *Malacca Maru* will go to Tampa and other ports and return to transit the Canal July 4 en route to San Francisco and Japan. According to Royal Netherlands, agents for the "K" line, she will be followed by the Swedish-flag *Vasaholm* and the Japanese-flag *Meisei Maru*.

New Cruise Ships

TWO NEW NAMES have been added to the list of cruise ships which are expected to visit the Panama Canal during the 1964-65 winter cruise season. One is the Holland-America Line passenger ship *Ryndam* due in Balboa January 13. The second is the new Israeli passenger liner *Shalom* now running between Haifa, Europe, and the United States.

The *Ryndam*, with from 400 to 800 passengers, is scheduled to make a round-the world cruise leaving Rotterdam early in November and calling at Australian and New Zealand ports and Tahiti. She will call for the first time at U.S. west coast ports and proceed to the Panama Canal and return home via Jamaica. Her agents, Pacific Ford, say this will be the first transit for the Canal for the 2-year-old vessel which usually stays on the North Atlantic run.

The *Shalom*, a Zim-Israel Navigation Co. ship, probably will include Cristobal in the ports of call when she is diverted to Caribbean cruise trade during the winter months, although United Fruit Co., agents for the line here, have no definite word. The ship was built this year in France for Zim Line trans-Atlantic service and is designed to carry 1,000 passengers in two classes.

TRANSITS BY OCEANGOING VESSELS IN APRIL

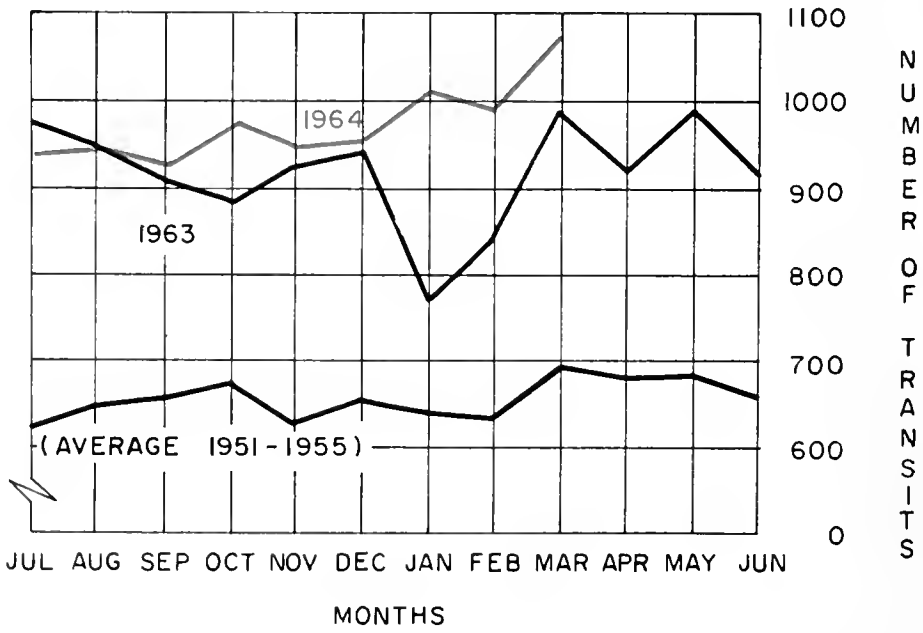
	1964	1963
Commercial	1,011	919
U.S. Government	23	22
Free	8	7
Total	1,042	948
TOLLS*		
Commercial	$5,205,789	$4,762,315
U.S. Government	97,742	99,315
Total	$5,303,531	$4,861,630
CARGO**		
Commercial	5,913,355	5,379,025
U.S. Government	70,187	78,541
Free	50,655	23,562
Total	6,034,197	5,481,128

* Includes tolls on all vessels, oceangoing and small.
**Cargo figures are in long tons.

Canberra on 2d Visit

THE P & O-ORIENT Line luxury ship *Canberra* arrived at Balboa May 28 on her second visit to the Canal carrying more than 1,000 passengers. The ship made the Canal transit northbound the following day and sailed at midnight for Nassau and European ports. The biggest passenger liner to be built in England since the *Queen Elizabeth*, the *Canberra* has an overall length of 818.5 feet and a beam of 102.5. This makes her one of the biggest commercial liners to use the Canal.

The *Canberra* came to the Canal from Australia and New Zealand via the U.S. west coast and Acapulco. She will be followed in July by the *Oriana*, the second largest ship in the P & O-Orient passenger fleet, which will follow the *Canberra*'s schedule.



ANNIVERSARIES

(On the basis of total Federal Service)

40

MARINE BUREAU

Wilfred E. Lindo
Marine Traffic Clerk

TRANSPORTATION AND TERMINALS BUREAU

Ivan A. Hyacinth
Supervisory Cargo Clerk

30

ADMINISTRATIVE SERVICES DIVISION

Joseph Sinclair
Photographic Laboratory Technician (Still)
Hamblin H. Sisnett
Compositor (Hand)

SUPPLY AND COMMUNITY SERVICE BUREAU

Fitz M. Barton
Leader Laborer (Cleaner)
Harold S. Trotman
Leader Laborer (Cleaner)

MARINE BUREAU

Robert K. Adams
Lead Foreman (Harbor)
Henry E. Lewis
Lead Foreman (Painter)
Leonard Small
Oiler (Floating Plant)

ENGINEERING AND CONSTRUCTION BUREAU

Clifford Charles
Quarryman
David W. Ellis
Operator, Craneboat
Ernest E. Faris
Clerk (Typing)

TRANSPORTATION AND TERMINALS BUREAU

Granville Haynes
Clerk
Enrique I. Marshall
Automotive Mechanic
Rudolph G. Reid
Supervisory Cargo Clerk

HEALTH BUREAU

Roland Carter
Clerk

20

OFFICE OF THE GOVERNOR-PRESIDENT

John E. Deming
Magistrate

COMPTROLLERS OFFICE

Ferne E. Levee
General Claims Examiner
Frances P. Walker
Time, Leave, and Payroll Clerk

SUPPLY AND COMMUNITY SERVICE BUREAU

Lucy R. Blackman
Sales Clerk
William M. Boyce
Sales Clerk
Humberto Castro
Grounds Maintenance Equipment Operator
Luis A. Espinal
Utility Worker
John Grandison
Laborer
Alejandro Martínez
Cemetery Worker
Dorico Membache
Utility Worker
Segundo H. Mero
Baker
Juan Padilla
Garbage Collector
Clara M. Reid
Accounts Maintenance Clerk
Apolinar Santamaría
Stockman
Ruth E. Trotman
Clerk
Linette J. Williams
Maid

MARINE BUREAU

Enrique Alvarenga
Linehandler (Deckhand)
Tomás G. Amador
Maintenanceman
Jaime D. Ceballos M.
Linehandler (Deckhand)
Justo P. Facete
Linehandler (Deckhand)
José E. Garay
Linehandler
Osbourne Hoy
Seaman
Víctor G. Jiménez
Painter (Maintenance)
Winston Layne
Linehandler (Deckhand)
Esau Livingston
Boatman
Frank Lumley
Linehandler (Deckhand)
L. N. Medford
Toolroom Attendant
Víctor M. Muñoz
Cement Finisher (Limited)
Arnoldo Orozco S.
Linehandler (Deckhand)
Herman Panzer
Lock Operator (Machinist)
Federico Ramos
Linehandler (Deckhand)

ENGINEERING AND CONSTRUCTION BUREAU

Gerardo Díaz D.
Seaman
Luther J. Quinn
2d Mate, Pipeline Dredge Class I
Agustín Santana
Seaman
Israel Watkins
Maintenanceman (Distribution System)

TRANSPORTATION AND TERMINALS BUREAU

Minnie B. Burton
Clerical Assistant (Stenography)
Reginald W. Graham
Truck Driver (Heavy Trailer)
Robert Lewin
Stevedore
Benedicto G. López
Carpenter (Maintenance)
Egbert G. Richardson
Helper Liquid Fuels Wharfman

CIVIL AFFAIRS BUREAU

Ethel V. Ferguson
Teacher (Junior High-U.S. Schools)
Enoch L. Hooper
Fire Lieutenant

HEALTH BUREAU

Pauline Fennell
Nursing Assistant (Psychiatry)
Charles E. Hurdle
Exterminator
Delia L. Miller
Dental Assistant (Restorative)
Marguerite M. Orr
Head Nurse (Psychiatry)
Raimundo Vergara
Ward Service Aid

"Sound Off" With Ear Muffs

Without ear muffs, a worker might find that noise is not only a nuisance but can very well lead to ear trouble later on.

WHO EVER heard of wearing ear muffs in the tropics?

Some of the Panama Canal Electrical Division employees have, and they wear them.

Stanwood O. Specht, Supervisor of the Mechanical Power Branch at the Miraflores Generating Station, and a number of the men working with him find that ear muffs are necessary equipment at times.

They are not used as protection against the cold, naturally, but are a safety measure to protect the hearing of Specht and his employees when they have to work for any length of time in close proximity to the big oil-fired gas turbo-generators installed reeently at Miraflores. When in full operation, these turbines sound something like a jet bomber warming for the takeoff.

Right now ear muffs are used only at the Miraflores substation but they are standard safety equipment in many factories and industrial plants in the United States where there is excessive noise or where employees may be exposed to loud industrial noises over a prolonged period of time.

The National Safety Council urges that for workers employed in sites where industrial noises reach a certain level, some precaution be taken to protect their hearing. The level of the high pitched whine of the turbines at Miraflores Substation was considered to be at a critical level.

With sound deadening muffs over their ears, the men working near the generators were faced by another problem—communication with the man operating the switchboard in the glass enclosed control room.

Electrical Division engineers solved this problem by equipping some of the ear muffs with a telephone deviee which permits the man wearing them to talk with the switchboard operator.

The two gas turbines installed at Miraflores are the first of their kind to be purchased by the Canal organization. They have increased the power generation potential of the Canal Zone by approximately one-third. At present one of the turbines is used on a 24-hour basis and the second during peak power demand periods.

They will be joined in 1966 by a steam-turbine generating unit which will have a steam boiler designed to employ the waste heat from the gas turbine. It will be supplemented by oil-firing as required.

Ear muffs protect the hearing of Robert J. Roy, shift engineer on watch at the Miraflores Substation, shown checking one of the gas turbo-generators by making a flame inspection. Roy is inside the protective aluminum covering of the generator standing next to the generator itself. The asbestos padding over the turbine is a protection against heat.

ACCIDENTS

FOR **THIS MONTH** AND **THIS YEAR**

APRIL

	FIRST AID CASES		QUIET HOSPITAL ZONE CASES		PAY CHECK OR LEAVE BALANCE DAYS ABSENT	
	'64	'63	'64	'63	'64	'63
ALL UNITS	252	267	18	22(1)	632	421
YEAR TO DATE	1016	1038(36)	76	71(10)	1305	2020(998)

Locks Overhaul injuries included in total.

THE STORY OF A NEW C.Z. STAMP

INTEREST IS mounting in the six Canal Zone commemorative stamps to be issued August 15 in observance of the 50th Anniversary of the Panama Canal Zone. How these stamps, as well as others issued for the Canal Zone, come into being is an interesting story.

The Canal Zone Stamp Advisory Committee, functioning since 1946, assists the Director of Posts, Earl F. Unruh, in the selection of subjects, themes, and designs. Started with three members, it now has six, all appointed for an indefinite term by the Governor on recommendation of the Director of Posts. Committee members are J. B. Clemmons, chairman; Paul Runnestrand, Willard E. Gwilliam, Robert A. Stevens, Grover D. Luce, and Hugh W. Cassibry. The Director of Posts is not a member but sits in on all meetings and assists in selections.

Suggestions for theme come from many sources and the committee considers them all. Those selected are passed to the Governor for approval. After he has approved an issue the committee meets to select a design. Suggestions and sketches are studied and partially by process of elimination, a design is selected. Different sketches are drawn and submitted to the Governor for approval. After his approval, the Director of Posts sends the sketch to the Bureau of Engraving and Printing for preparation of a working model.

Many times the Bureau prepares two or more models and when they are received, the Director of Posts calls a Stamp Advisory Committee meeting, where a final model is selected to be used in engraving and, finally, printing. At this point the work of the committee is finished until another stamp is needed or to be issued in commemoration of an occasion or in honor of an activity or person.

Houston's Port Paved the Way to Greatness

(*Continued from p. 10*)

100,000 persons constitute about one-third the working force of Harris County.

These 100,000 employees earn an average of $5,000 yearly, which means a $500 million annual payroll from ship channel industries.

Second, estimates place another 10,000 persons engaged in the direct operation of port facilities, at wharves, on railroads, barge lines, truck lines, warehouses, stevedoring, crating, and in the myriad other services. With the same average $5,000 yearly projected to them there is an additional $50 million in payroll to help support the innumerable businesses, service occupations, and professional groups that are therefore largely dependent directly or indirectly on the Port of Houston, its activity, and its industry.

Third, there is the actual economic activity engendered by a vessel loading or unloading cargo in the Port of Houston, and its effect on the city and county economy. A survey by the consulting engineering firm of Knappen, Tippetts, Abbott & MacCarthy for the Port of Houston a few years ago estimated that an average of $17.20 is expended in the loading or unloading of a ton of general cargo. For a ton of grain the estimate was nearly $5 and for handling a ton of petroleum it was but $1.

In 1962 there were 5,111,669 tons of general cargo handled at the Port of Houston and at an estimated $17.20 per ton this generated an additional economic activity of almost $88 million. Additionally the port shipped 2,795,864 tons of grain and at nearly $5 per ton generated $14 million in economic activity. There were nearly 35,488,293 tons of bulk petroleum loaded or unloaded at the port during the year for another $35 million plus of economic activity, or a total direct contribution of another $137 million of money in circulation due to the port and its activity.

Going into service in September of 1961, the navigation district's dry bulk plant had handled almost half a million tons of bulk materials ranging from ores to soy-bean meal by the end of 1962.

This is not all, however. Ships calling at the port have many expenditures, both to the terminal operator and to the various services at the port such as bunkering, chandlering, and repairs. A Maritime Association survey estimates every deep-sea vessel spends an average of $15,000 for these services while in port. This means additional business enterprises for a port city which supply ships with everything from steel hawsers to sail needles.

It is a big business in Houston where more than 4,600 deep-sea vessels call yearly. Projecting the $15,000 average expenditure per vessel they contribute another $69 million to the local economy.

These latter three factors of port operations payroll, cargo handling activities, and ship services total an additional quarter of a billion dollars of economic activity for the Houston area. This additional money in circulation, this spending power stems directly from the port and, coupled with the half a billion dollars stemming annually from ship channel industry, provides a contribution of some three-quarters of a billion dollars.

Dry bulk materials handling plant at Port of Houston.